

*Agrimoniae* DC., now placed in the genus *Pucciniastrum*, I kept the numerous collections on *Potentilla* next to that species but it was not until a few years ago that I was successful in finding the teleutospores which are not abundant and form small reddish brown spots on the leaves and stipules. The specimen in *Fungi Rossiae* has only uredosori but they agree with the fungus on *Potentilla*. Probably the species is common wherever *Potentilla tridentata* occurs.

CAMBRIDGE, MASSACHUSETTS.

## THE REPRESENTATIVES OF *RUMEX SALICIFOLIUS* IN EASTERN AMERICA.

M. L. FERNALD.

IN his revisions of the North American species of *Rumex*, Professor Trelease<sup>1</sup> placed together as *R. salicifolius* a vast amount of material with the broad range: "Arctic America across to Alaska, south to New Hampshire, the Great Lakes, and in the mountains to southern California and Mexico, where it closely approaches *R. Mexicanus*." Then, after referring to certain variations of the species as thus interpreted, the author says: "It may be that these forms will bear separation, even from the Old World type; but the (frequently young) specimens in herbaria show as many intermediate forms and admit of so poor a geographical delimitation, that I cannot find good grounds for recognizing more than a single species."

"A more zigzag plant with broad elliptical rather firm leaves ( $3 \times 8$  cm.) and one valve almost covered by the very large callosity ( $1.5$  to  $2 \times 3$  to  $4$  mm.), the other two naked, occurs from Sta. Cruz Mountains . . . Sta. Lucia Mountains . . . and about San Francisco, Cal. . . . Others may consider this to be clearly distinct, but I leave it here for the present."

Students of the flora of Western America have recently been inclined to recognize in the aggregate *Rumex salicifolius* a number of

<sup>1</sup> Trelease, Third Ann. Rep. Mo. Bot. Gard. 87 (1892).



apparently distinct species; and since we have in New England and Eastern Canada two clearly separable plants which have been passing as *R. salicifolius* it becomes important to determine what they should be called.

In the first place we must determine what plant Weinmann had before him in describing *Rumex salicifolius*. This is much simpler than would be inferred from Professor Trelease's reference to "the Old World type"; for Weinmann's plant came from California and his description was very obviously based upon the peculiar local plant, with elliptical leaves and "one valve almost covered by the very large callosity, the other two naked", which Professor Trelease singled out from the aggregate as most worthy of separation from *R. salicifolius*. The original description was as follows:

"2. RUMEX SALICIFOLIUS mihi. Floribus dioicis, valvulis integerimis; unica granifera, foliis oblongo-lanceolatis integerrimis acuminatis subtus glaucescentibus.

Radix perennis et caulis basi interdum lignescens, 2-3 pedalis, ramosus, erectus. Folia petiolata, oblongo-lanceolata, undique attenuata 6-7 uncias longa, sesquiuncias lata. Ochreae tenerrimae semperlacerae. Verticilli congesti multiflori. In California, h. 74." <sup>1</sup>

This Californian plant the true *Rumex salicifolius*, which is well shown in specimens collected by Mr. A. A. Heller on the beach near the Cliff House, San Francisco, June 16, 1902, is very distinct from all the other plants which have been referred to that species not only in its short oblong or elliptical leaves, but in the solitary very large grain of the fruit; and so far as the writer is able to determine from the herbarium material at hand it is confined to the region from San Francisco southward into Monterey County, California.

The very different plant of the New England coast which has been passing under the name *Rumex salicifolius*, the familiar White Dock of our salt marshes and sea beaches, is a somewhat depressed plant, the stems (usually several) more or less reclining or decumbent, finally ascending. Its pale leaves are narrowly lanceolate and elongate, the principal ones measuring 1 to 2 dm. long, 1.3 to 2.5 cm. broad. The lower branches of its mature panicle spread nearly at right angles. Its fruiting calyx is whitish-brown, the valves 3 to 4 mm. long, but slightly exceeding the 3 conspicuous whitish ovoid or lance-ellipsoid

<sup>1</sup> Weinmann, Flora, iv. 28 (1821).



spongy grains ( $2.5$  to  $3 \times 1$  to  $2$  mm.). This plant which abounds upon sea-coasts of Nova Scotia and eastern New England becomes rather local southward, though it is said to reach the coast of southern New York; and it is gratifying to find it beautifully characterized by our own New England botanist, Jacob Bigelow, in the second edition of the *Florula Bostoniensis*, as

“\**RUMEX PALLIDUS*.

*White Dock.*

*R. foliis lineari-lanceolatis, acutis; spicis gracilibus; valvulis ovatis, integris, granum vix superantibus.*

Leaves linear-lanceolate, acute; spikes slender; valves ovate, entire, hardly larger than the grain.

Stems numerous, ascending, smooth, round, slightly furrowed. Leaves smooth, linear-lanceolate, acute, petioled, more or less waved on the margin. Spikes slender, owing to the shortness of the pedicels, the largest with a leaf at base. Calyx linear, acute. Petals ovate, obtuse, erect. Stamens six, anthers whitish, two lobed. Styles three. Fruit crowded, the valves ovate, entire or furnished with a single tooth at base, with a large, white, fleshy, obtuse grain nearly covering the back of each.—Salt marshes.—June.—Perennial.

First sent by Dr. Nichols from Danvers.”<sup>1</sup>

The other plant of eastern America which has been passing as *Rumex salicifolius* is more upright and generally taller and greener than *Rumex pallidus*, its leaves somewhat broader ( $1.5$  to  $3.5$  cm. broad), and its pedicels longer; but its chief distinctions are in the form of its panicle and the size, color, and grains of the fruiting calyx. The branches of the very dense elongate panicle are strict or very strongly ascending, not horizontally spreading as in *R. pallidus*; the valves of the olive-brown or ruddy calyx are  $3.5$  to  $6$  mm. long, their tips much exceeding the  $2$  or  $3$  narrowly ellipsoid to subulate brown grains ( $2$  to  $2.5 \times 0.5$  to  $1.5$  mm.); and the achenes are smaller than those of *R. pallidus*. This plant, with the strict inflorescence, darker and longer fruiting calyx and slender grains, replaces *R. pallidus* on the coasts of eastern Quebec, Newfoundland, and Labrador, and extends from sea-level in the East westward to Assiniboia and British Columbia, south very locally to central Maine, Michigan and Missouri; and along the Rocky Mts. at altitudes ranging from  $1675$  to  $2750$  meters ( $5500$  to  $9000$  feet) to central Mexico and even to Mt.

<sup>1</sup> Bigelow, Fl. Bost. ed. 2, 143 (1824).



Orizaba. This is the plant which was described in 1856 by Meisner<sup>1</sup> as *Rumex mexicanus*, a name which may seem doubtfully applicable to a plant which extends into the northern Rocky Mountains and eastward across Canada to the Gulf of St. Lawrence. But this range is in reality a very natural one and it is followed by more than sixty of our best marked northeastern species, such as *Ranunculus Cymbalaria*, *Rumex persicarioides*, *Lonicera involucrata*, *Limosella aquatica*, *Veronica americana*, &c., which, crossing the boreal district of North America, extend southward along the Rocky Mountain System to northern and central Mexico; and *Chimaphila umbellata*, *Pyrola secunda*, *Cystopteris fragilis*, *Asplenium Trichomanes*, &c., which reach the high summits of Mt. Orizaba or of the Volcan de Fuego in Guatemala, where the last named species is found above 3350 meters (11,000 feet).

GRAY HERBARIUM.

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SCIRPUS HUDSONIANUS IN RHODE ISLAND.—On June 22d, while in company with Prof. J. Franklin Collins the writer discovered *Scirpus hudsonianus* (Michx.) Fernald (*Eriophorum alpinum* L.), in a cold bog not far from Diamond Hill in the town of Cumberland. At only one other station known to the writer has this plant been discovered so far south. In RHODORA [1900] Mr. Roland Harper refers to it as occurring at Willington, Connecticut, which is at about the same latitude as the Rhode Island station reported above.—ERNEST SHAW REYNOLDS, Providence, Rhode Island.

[*Scirpus hudsonianus* occurs at a number of stations besides Willington in Tolland County, Connecticut. One of these, Storrs, where the plant was recently found by Professor A. F. Blakeslee, is about twenty miles further south than the Diamond Hill station.—Eds.]

<sup>1</sup> DC. Prodr. xiv. 45 (1856).